



Caterpillar Inc.  
P.O. Box 600  
Mossville, Illinois 61552

February 18, 2015

Mr. Justin Greuel  
Director, Diesel Engine Compliance Center  
U.S. Environmental Protection Agency  
Office of Transportation & Air Quality  
1200 Pennsylvania Ave, NW  
Washington, DC 20460

Non-Road Engine Amended Emissions Defect Information Report


Dear Mr. Greuel:


Pursuant to 40 CFR § 1068.501, Caterpillar Inc. reported on December 3, 2013 that a defect reporting threshold had been reached on certain C13 and C15 Non-Road engines due to a CRS fuel nozzle coking issue. Since that time, a fix has been implemented and additional families have been identified with the same issue. The updated list of affected engines is from MY2011, MY2012, MY2013, and MY2014, engine families BCPXL09.3HPA, BCPXL12.5HPA, BCPXL15.2HPA, BCPXL18.1HPA, CCPXL09.3HPA, CCPXL09.3HPB, CCPXL12.5HPB, CCPXL15.2HPA, CCPXL18.1HPA, DCPXL09.3HPA, DCPXL09.3HPB, DCPXL12.5HPB, DCPXL15.2HPA, DCPXL18.1HXF, and ECPXL09.3HPB. This emissions defect information report contains trade secrets, proprietary, and/or company confidential information and should be treated as such under 40 CFR § 2.203(b) and § 1068.10.

An Amended EDIR is attached, which provides information concerning the issue and the manner in which it was corrected.

If you have any questions or require additional information, please call.

Sincerely,

  
Manager, Emissions Conformance and Systems Development  
Large Power Systems Division (MOS 11)  
Caterpillar Inc.

  
cc: Erik White – ARB

**AMENDED EMISSIONS DEFECT INFORMATION REPORT****1) Manufacturer's corporate name and a person to contact regarding this defect:**

Caterpillar Inc.

Manager, Emissions Conformance and Systems Development

**2) Description of the defect, including a summary of any engineering analyses and associated data, if available:**

Caterpillar has discovered that the fuel nozzle on the auxiliary regeneration device that is used to regenerate the diesel particulate filter may plug due to coking. If this occurs, the restricted fuel nozzle prevents the regeneration device from burning the particulate matter out of the diesel particulate filter. Once a fuel nozzle becomes plugged and regeneration is compromised the Malfunction Indicator Light (MIL) is illuminated.


**3) Description of the engine/equipment that have the defect.**

<u>Engine Family</u>	<u>Model</u>	<u>Production Dates</u>
BCPXL09.3HPA	C9.3	01Jan2011 – 31Dec2011
BCPXL12.5HPA	C13	01Jan2011 – 31Dec2011
BCPXL15.2HPA	C15	01Jan2011 – 31Dec2011
BCPXL18.1HPA	C18	01Jan2011 – 31Dec2011
CCPXL09.3HPA	C9.3	01Jan2012 – 31Dec2012
CCPXL09.3HPB	C9.3	01Jan2012 – 31Dec2012
CCPXL12.5HPB	C13	01Jan2012 – 31Dec2012
CCPXL15.2HPA	C15	01Jan2012 – 31Dec2012
CCPXL18.1HPA	C18	01Jan2012 – 31Dec2012
DCPXL09.3HPA	C9.3	01Jan2013 – 31Dec2013
DCPXL09.3HPB	C9.3	01Jan2013 – 31Dec2013
DCPXL12.5HPB	C13	01Jan2013 – 31Dec2013
DCPXL15.2HPA	C15	01Jan2013 – 31Dec2013
DCPXL18.1HXF	C18	01Jan2013 – 31Dec2013
ECPXL09.3HPB	C9.3	01Jan2014 – 31Dec2014

*The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code. Trade Secrets, Proprietary and/or Company Confidential Information Subject to Protection Under 40 CFR § 2.203(b) and § 1068.10.*

**AMENDED EMISSIONS DEFECT INFORMATION REPORT****4i) Number and percentage of engines known or estimated to have the defect and an explanation of the means by which this number was determined:**

The following number of engines is affected by this defect based on the analysis of warranty claims:

<u>Model Year</u>	<u>Engine Family</u>	<u>Number of Affected Engines</u>	<u>Total U.S. Directed Volumes</u>	<u>Defect Percentage</u>
2011	BCPXL09.3HPA			
2011	BCPXL12.5HPA			
2011	BCPXL15.2HPA			
2011	BCPXL18.1HPA			
2012	CCPXL09.3HPA			
2012	CCPXL09.3HPB			
2012	CCPXL12.5HPB			
2012	CCPXL15.2HPA			
2012	CCPXL18.1HPA			
2013	DCPXL09.3HPA			
2013	DCPXL09.3HPB			
2013	DCPXL12.5HPB			
2013	DCPXL15.2HPA			
2013	DCPXL18.1HXF			
2014	ECPXL09.3HPB			

**4ii) Describe any statistical methods used to determine the number of affected engines/equipment:**

No statistical methods or tools were used. Counts were based on actual build data.

**5i) An estimate of the defect's impact on emissions, with an explanation of how you calculated this estimate.**

The emissions impact is expected to be negligible as failure of the Aftertreatment Regeneration Device (ARD) would result in the improper ignition of the Caterpillar Regeneration System causing the Malfunction Indicator Light (MIL) to illuminate prompting the operator to seek service. If the operator were to ignore the MIL, this defect would result in a derate of the engine.

*The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code. Trade Secrets, Proprietary and/or Company Confidential Information Subject to Protection Under 40 CFR § 2.203(b) and § 1068.10.*

**AMENDED EMISSIONS DEFECT INFORMATION REPORT****5ii) Available summary of any emissions data demonstrating the impact of the defect:**

No emissions data was collected.

**6) A description of your plan for addressing the defect or an explanation of your reasons for not believing the defects must be addressed.**

Caterpillar has redeveloped the engine software to address the fuel nozzle plugging issue by preventing coking. The software update will increase fuel nozzle heater cycle duration and frequency. Caterpillar will replace the defective parts and update the software upon failure within the warranty period. In addition, this has been implemented into production for all affected engine families and ratings.

*The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code. Trade Secrets, Proprietary and/or Company Confidential Information Subject to Protection Under 40 CFR § 2.203(b) and § 1068.10.*